

**STATEMENT OF BASIS (AI No. 1496)**

for draft Louisiana Pollutant Discharge Elimination System permit No. LA0004774 to discharge to waters of the State of Louisiana.

**THE APPLICANT IS:** Omega Protein, Inc.  
Abbeville Facility  
9730 Andrew Rd.  
Abbeville, LA 70510

**ISSUING OFFICE:** Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services  
Post Office Box 4313  
Baton Rouge, Louisiana 70821-4313

**PREPARED BY:** Kelli Hamilton

**DATE PREPARED:** January 8, 2010

**1. PERMIT STATUS****A. Reason For Permit Action:**

Permit reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term.

**B.** LPDES permit - LPDES permit effective date: February 1, 2005  
LPDES permit expiration date: January 31, 2010  
EPA has not retained enforcement authority.

**C.** Date Application Received: July 24, 2009

**2. FACILITY INFORMATION****A. FACILITY TYPE/ACTIVITY - menhaden fish processing facility**

Omega Protein - Abbeville Facility is an existing fish processing facility. Raw menhaden fish are pumped from fishing boats into the plant where they are cooked, pressed, centrifuged, and concentrated to produce fish meal and oil.

The facility is subject to the Fish Meal Processing Subcategory, Subpart O, of the Canned and Preserved Seafood Processing Point Source Category Effluent Limitation Guidelines (ELG), 40 CFR 408.152. The facility is also subject to wasteload allocations set forth in the 1987 Vermillion River Watershed TMDL for Dissolved Oxygen.

**B. FEE RATE**

1. Fee Rating Facility Type: minor
2. Complexity Type: II (BPJ points to 0 as per administrative decision)
3. Wastewater Type: II
4. SIC code: 2077

Statement of Basis for  
Omega Protein, Inc., Abbeville Facility  
LA0004774, AI No. 1496  
Page 2

C. LOCATION - 9730 Andrew Rd. in Abbeville, Vermilion Parish  
Latitude 29°49'17", Longitude 92°8'3"

**3. OUTFALL INFORMATION**

Outfall 001

Discharge Type: process wastewater including barometric condenser water and dryer scrubber water, cooling tower blowdown, boiler blowdown, boiler condensate overflow, water softener backwash, washdown water

Treatment: biological pond

Location: at the point of discharge from the biological pond

Flow: 0.2 MGD

Discharge Route: Vermilion River

Outfall 003

Discharge Type: treated sanitary wastewater

Treatment: sanitary plant with aeration and chlorination

Location: at the point of discharge from the sanitary treatment system

Flow: 1,000 gpd

Discharge Route: Vermilion River

**4. RECEIVING WATERS**

STREAM - Vermilion River

BASIN AND SEGMENT - Vermilion-Teche River Basin, Segment 060802

DESIGNATED USES - a. primary contact recreation  
b. secondary contact recreation  
c. propagation of fish and wildlife  
f. agriculture

**5. TMDL STATUS**

Subsegment 060802, Vermilion River From LA 3073 bridge to ICWW, is not listed on LDEQ's Final 2006 303(d) list as impaired. However, subsegment 060802 was previously listed as impaired for phosphorus, nitrogen, organic enrichment/low DO, pathogen indicators, suspended solids/turbidity/siltation, and carbofuran, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in

Statement of Basis for  
 Omega Protein, Inc., Abbeville Facility  
 LA0004774, AI No. 1496  
 Page 3

approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for subsegment 060802:

Phosphorus, Nitrogen, and Organic Enrichment/Low DO

The 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen was revised in December 1999, and approved by EPA in the TMDL for Vermilion River Oxygen Demand and Nitrogen. These TMDLs re-established that NPDES permits for individual point sources in the Vermilion Watershed should continue to be issued on the basis of flow rates as follows:

FLOW RATE	PERMIT LIMITS
greater than 25,000 gpd	May - Dec.: 10 mg/L CBOD <sub>5</sub> /5 mg/L NH <sub>3</sub> -N/5 mg/L DO Jan.- April: 20 mg/L CBOD <sub>5</sub> /10 mg/L NH <sub>3</sub> -N/5 mg/L DO
25,000 gpd or less	secondary limits year round

The waste load allocations (WLAs) for the facility (previously Seacoast Inc.) did not change from those established in the State's previous 1987 TMDL. Therefore, this discharge will be permitted accordingly.

LDEQ's position regarding water quality criteria for nutrients, is that when oxygen-demanding substances are controlled and limited in order to ensure that the dissolved oxygen criterion is supported, nutrients are also controlled and limited. See In The Matter of Sierra Club and Louisiana Environmental Network Request for Nutrient Limits. Docket No. AHD-DR-96001. LDEQ April 29, 1996. LAC 33:IX.2707.D.1.f.iii allows the establishment of effluent limitations based on an indicator parameter for the pollutant of concern. LDEQ's consistent approach to controlling nutrients where the WQMP does not otherwise require specific nutrient limitations is achieved by limiting the discharge of oxygen-demanding substances through CBOD<sub>5</sub> and BOD<sub>5</sub> limitations. Compliance with the CBOD<sub>5</sub> and BOD<sub>5</sub> limitations as indicator parameters will result in the control of nutrients from the discharge sufficient to attain and maintain the applicable water quality standard. Effluent monitoring of the indicator parameters as conducted by the permittee in accordance with the permit in addition to LDEQ's ambient water quality monitoring program will allow for further evaluation by the Department to determine the effectiveness of the limitation. The reopener clause located in Other Conditions of the permit allows the Department to modify or revoke and reissue the permit if the limitations as set on the indicator parameter are shown to no longer attain and maintain applicable water quality standards.

Statement of Basis for  
Omega Protein, Inc., Abbeville Facility  
LA0004774, AI No. 1496  
Page 4

Pathogen Indicators

Outfall 003 has the potential to discharge pollutants associated with the pathogen indicators impairment. The *Vermilion River Fecal Coliform TMDL* states that "The Louisiana Water Quality Regulations require point source dischargers of sanitary wastewater to maintain a fecal coliform count of 200 cfu/100 mL in their effluent... Therefore, there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL." Thus, fecal coliform shall remain as previously permitted.

TSS

Outfalls 001 and 003 have the potential to discharge pollutants associated with the TSS impairment. The *TMDL for TSS, Turbidity and Siltation for the 15 Subsegments in the Vermilion River Basin* states that "the most significant source of TSS and sediment in this watershed is suspended solids from wet weather runoff... Point sources discharge primarily organic TSS, which does not contribute to habitat impairment..." Therefore, TSS shall remain as previously permitted.

Carbofuran

The *TMDL for Carbofuran in the Mermentau and Vermilion Teche River Basins* was final on March 21, 2002. No allocation was given to point source discharges in the Vermilion Teche River Basin. According to the TMDL, there is only one point source in the Vermilion Teche (FMC Corp. LA0064360) but it does not discharge Carbofuran. In addition, this facility has no potential to discharge Carbofuran. Therefore, requirements for Carbofuran will not be placed in this permit.

6. CHANGES FROM PREVIOUS PERMIT

Oil and Grease limitations for Outfall 001 have increased due to an increase in production. Weekly Average Limitations for Outfall 003 have been changed to Daily Maximum Limitations.

7. COMPLIANCE HISTORY/COMMENTS

A. Compliance History

No records of recent compliance actions were found.

An inspection was conducted March 28, 2008. EDMS document 36704354

B. DMR Review/Excursions - A DMR review was completed for October 2007 through September 2009. The following excursions were reported:

Statement of Basis for  
 Omega Protein, Inc., Abbeville Facility  
 LA0004774, AI No. 1496  
 Page 5

<u>DATE</u>	<u>PARAMETER</u>	<u>OUTFALL</u>	<u>REPORTED VALUE</u>		<u>PERMIT LIMITS</u>	
			<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>
12/07	TSS	003	142	142	30	45
3/08	TSS	003	112	112	30	45
12/08	Fecal Coliform	003	---	600	---	200

#### 8. EXISTING EFFLUENT LIMITS

Outfall 001 -	(lbs/day)	(mg/l)
CBOD(5/1-12/30)	120:180	---
CBOD(1/1-4/31)	240:360	---
TSS	434:651	---
NH3-N(5/1-12/30)	60:90	---
NH3-N(1/1-4/31)	120:180	---
DO	---	5(min)
Oil and Grease	2500:5714	---
pH	---	6-9 s.u.

Outfall 003-	
BOD	30:45 mg/l
TSS	30:45 mg/l
Fecal Coliform	--:200 colonies/100ml
pH	6-9 s.u.

#### 9. ENDANGERED SPECIES

The receiving waterbody, Subsegment 060802 of the Vermilion-Teche River Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated January 5, 2010 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

Statement of Basis for  
Omega Protein, Inc., Abbeville Facility  
LA0004774, AI No. 1496  
Page 6

#### 10. HISTORIC SITES

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

#### 11. TENTATIVE DETERMINATION

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in the application.

#### 12. PUBLIC NOTICES

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

#### 13. STORM WATER POLLUTION PREVENTION PLAN (SWP3) REQUIREMENT

A SWP3 is included in the permit because in accordance with LAC 33:IX.2511.A.1, storm water shall not be required to obtain an LPDES permit "... except... discharges associated with industrial activity." In accordance with LAC 33:IX.2511.B.14.a-k, facilities classified as SIC code 2077 are considered to have storm water discharges associated with industrial activity.

For first time permit issuance, the SWP3 shall be prepared, implemented, and maintained within six (6) months of the effective date of the final permit. For renewal permit issuance, the SWP3 shall be reviewed and updated, if necessary, within six (6) months of the effective date of the final permit. The plan should identify potential sources of storm water pollution and ensure the implementation of practices to prevent and reduce pollutants in storm water discharges associated with industrial activity at the facility. (see Narrative Requirements for the AI)

Statement of Basis for  
 Omega Protein, Inc., Abbeville Facility  
 LA0004774, AI No. 1496  
 Page 7

### Rationale for Omega Protein, Inc.

1. **Outfall 001** process wastewater including barometric condenser water and dryer scrubber water, cooling tower blowdown, boiler blowdown, boiler condensate overflow, water softener backwash, washdown water (estimated flow is 0.2 MGD)

<u>Pollutant</u>	<u>Limitation</u> Mo. Avg:Daily Max (lb/day)	<u>Reference</u>
Flow MGD	Report:Report	LAC 33:IX.2707.I.1.b
CBOD5 May-Dec.	120:180	TMDL (*1); previous permit
Jan.-Apr.	240:360	TMDL (*1); previous permit
NH3-N May-Dec.	60:90	TMDL (*1); previous permit
Jan.-Apr.	120:180	TMDL (*1); previous permit
TSS	434:651	TMDL (*2); previous permit
DO (effluent)	5 mg/l minimum	TMDL (*1); previous permit
Oil and Grease	3360:7680	40 CFR 408.152.b (*3)
pH min/max	6.0 - 9.0	40 CFR 408.152.b (*3); previous permit
s.u.	(min) (max)	

**Treatment:** biological pond

**Monitoring Frequency:** Flow, CBOD5, TSS, NH3-N, DO, and pH shall be monitored weekly. Oil and Grease shall be monitored quarterly.

**Limits Justification:** The facility is subject to the Canned and Preserved Seafood Processing Point Source Category Effluent Limitation Guidelines (ELG), Subpart O - Fish Meal Processing Subcategory, 40 CFR 408.152. However, the facility is also subject to TMDL wasteload allocations for CBOD5, NH3-N, and TSS that are more stringent than the ELG mass limits.

**ELG Limitation lbs/day** = Based on the facility's reported 2,400,000 lbs/day of seafood processed (email dated 2/17/10), the ELG-based limits are:

Limitation lbs/day = (seafood processed lbs/day) (ELG lbs/1000 lbs)

#### BOD5

Monthly Average = (2,400,000 lbs/day) (2.8 lbs/1000 lbs) = 6720 lbs/day

Daily Maximum = (2,400,000 lbs/day) (3.5 lbs/1000 lbs) = 8400 lbs/day

#### TSS

Monthly Average = (2,400,000 lbs/day) (1.7 lbs/1000 lbs) = 4080 lbs/day

Daily Maximum = (2,400,000 lbs/day) (2.6 lbs/1000 lbs) = 6240 lbs/day

#### Oil & Grease

Monthly Average = (2,400,000 lbs/day) (1.4 lbs/1000 lbs) = 3360 lbs/day

Daily Maximum = (2,400,000 lbs/day) (3.2 lbs/1000 lbs) = 7680 lbs/day

Statement of Basis for  
 Omega Protein, Inc., Abbeville Facility  
 LA0004774, AI No. 1496  
 Page 8

CBOD5 and NH3-N - limitations established in the previous permit were based on the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen. This TMDL was approved by EPA in the TMDL for Vermilion River Oxygen Demand and Nitrogen(\*1). Seasonal WLAs (waste load allocations) for CBOD5 and NH3-N were established based on flow rates as follows:

Months	Waste Load Allocation (mg/L)		
	CBOD5	NH3-N	DO
May - Dec.	10	5	5
Jan. - Apr.	20	10	5

These allocations were incorporated in the permit as monthly average mass limits for Outfall 001. Daily maximum mass limits were established using a 1.5 factor. Flow of 1.441 MGD was used to calculate limitations in the TMDL for Vermilion River Oxygen Demand and Nitrogen (Federal Register Notice: Volume 66, Number 66, pages 18087 - 18089 (4/5/2001)) which references the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen. This flow does not represent the current reported flow.

TSS - the TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin (\*2) does not establish WLAs for TSS since the TSS impairment is not caused by point source discharges. Therefore, because the limits in the previous permit are more stringent than the ELGs (\*3), the TSS limits shall remain as previously permitted.

Dissolved Oxygen - a minimum DO limit of 5 mg/L has been established based on the TMDL for Vermilion River Oxygen Demand and Nitrogen (\*1) and the previous permit.

Oil and Grease - an oil and grease limit has been established based on ELGs (\*3).

pH - minimum and maximum pH values of 6 su and 9 su, respectively, have been established based on ELGs (\*3) and the previous permit.

- (\*1) TMDL for Vermilion River Oxygen Demand and Nitrogen (Federal Register Notice: Volume 66, Number 66, pages 18087 - 18089 (4/5/2001)) which references the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen
- (\*2) TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin (Federal Register Notice: Volume 67, Number 85, pages 22080 - 22082 (5/2/2002))
- (\*3) Canned and Preserved Seafood Processing Point Source Category Effluent Limitation Guidelines (ELG), Subpart O - Fish Meal Processing Subcategory, 40 CFR 408.152



Statement of Basis for  
 Omega Protein, Inc., Abbeville Facility  
 LA0004774, AI No. 1496  
 Page 9

2. Outfall 003 treated sanitary wastewater (estimated flow is 0.01 MGD)

<u>Pollutant</u>	<u>Limitation</u> Mo. Avg: Daily Max (mg/l)	<u>Reference</u>
Flow MGD	Report: Report	LAC 33:IX.2707.I.1.b
BOD5	30:45	TMDL (*1); Class II Sanitary General Permit
TSS	30:45	Class II Sanitary General Permit
Fecal Coliform col/100ml	---:200	previous permit
pH min/max	6.0 - 9.0	Class II Sanitary General Permit

**Treatment:** sanitary plant with aeration and chlorination

**Monitoring Frequency:** quarterly

**Limits Justification:** BOD5 - Limits for BOD5 are based on the *TMDL for Vermilion River Oxygen Demand and Nitrogen* (\*1) which recommends that discharges of less than 25,000 gpd receive secondary treatment limits year-round. Therefore, limitations are based on the Class II Sanitary Discharge General Permit, LAG540000, and the previous permit.

TSS - the *TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin* (\*2) did not place specific reductions on point sources. Therefore, limitations are based on the Class II Sanitary Discharge General Permit, LAG540000, and the previous permit.

Fecal Coliform - the *Vermilion River Fecal Coliform TMDL* (\*3) states that there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL. Therefore, fecal coliform shall remain as previously permitted.

pH - minimum and maximum pH values of 6 su and 9 su, respectively have been established based on the Class II Sanitary Discharge General Permit, LAG540000, and the previous permit.

(\*1) *TMDL for Vermilion River Oxygen Demand and Nitrogen* (Federal Register Notice: Volume 66, Number 66, pages 18087 - 18089 (4/5/2001)) which references the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen

(\*2) *TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin* (Federal Register Notice: Volume 67, Number 85, pages 22080 - 22082 (5/2/2002))

(\*3) *Vermilion River TMDL for Fecal Coliform* (Federal Register Notice: Volume 66, Number 66, pages 18087 - 18089 (4/5/2001))

Statement of Basis for  
Omega Protein, Inc., Abbeville Facility  
LA0004774, AI No. 1496  
Page 10

TMDL Total Maximum Daily Load  
\* Existing permits for similar outfalls  
BPJ Best Professional Judgement  
su Standard Units

NOTE

For outfalls containing concentration limits, the usage of concentration limits is based on BPJ for similar outfalls since the flow is variable and estimated.